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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,365	12/07/2001	Chul B. Park	13842	7051

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DOWELL & DOWELL PC
SUITE 309
1215 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER

KUHNS, ALLAN R

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 09/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/005,365

Applicant(s) PARK ET AL.

Examiner
KUHNS

Group Art Unit
1732

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE(3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-68 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-68 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Claims 10 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are indefinite because "chosen" is used instead of "selected".

Also, "or a mixture of thereof" should be modified to read "and mixtures thereof". Clarification is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koenig et al. (6,280,667). Koenig et al. disclose or suggest the basic claimed process for producing a plastic/wood fiber composite foamed structures including (1) pre-drying wood fiber filler having a volatilization temperature (column 3, lines 9-15), (2) mixing the dried wood fiber filler with plastic to produce a plastic/wood fiber mixture and maintaining the mixture below an active volatilizing temperature, (3) feeding the plastic/wood fiber mixture into an extruder, (4) introducing a blowing agent into the plastic/wood fiber mixture and mixing it therewith to produce a plastic/wood fiber/gas mixture, (5) subjecting the plastic/wood fiber/gas mixture to high shear forces in the presence of high pressures and maintaining the processing temperature below an active volatilizing temperature, and (6) extruding the plastic/wood fiber/gas mixture to produce a plastic/wood fiber composite. Koenig et al. appear not to explicitly state that

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temperatures are to be maintained below a degradation temperature, but such is well known and would have been obvious to one of ordinary skill in the art, given that Koenig et al. teach at column 8, lines 30-33 that sensitive fiber morphology is not degraded.

Koenig et al. teach the aspect of using a physical blowing agent, as in claims 9, 13 and 66, and the aspect of using carbon dioxide or nitrogen, as in claims 10, 14, and 68, at column 18, lines 1-35. Koenig et al. also disclose the use of chemical blowing agents, as in claims 11 and 15, at column 18, line 2. Appropriate processing temperatures, as in claims 2-7, would have been readily determined through routine experimentation by one of ordinary skill in the art based on physical properties of the ingredients used. It is submitted that some volatiles in the wood fiber used by Koenig et al. inherently act as a blowing agent, as in claim 8. Koenig et al. discuss the use of a single screw or twin screw extruder and illustrate the use of cascading extruders, as in claims 26-65. Cooling in the manner of claims 16-25 is well known and such would have been obvious to one of ordinary skill in the art in order to prepare the mixture for extrusion.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is (703) 308-3462. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on (703) 305-5493. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Allan R. Kuhns
ALLAN R. KUHNS
PRIMARY EXAMINER AU 1732
9-9-03